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OFFICIAL

TO: Examiner (not assigned yet) FROM: Frank C. Eisenschenk, Ph.D.

COMPANY: U.S. Patent Office, Art Unit 1645 DATE: April 6, 2004

FAX NO.: 1-703-872-9306 NO. OF PAGES:
(INCLUDING COVER SHEET) 7

SUBJECT/MESSAGE: U.S. Patent Application Docket No. UF-167XC3D2
Nucleic Acid Vaccines Against Rickettsial Diseases and
Methods of Use
(Barbet, et al.)
Serial No. 10/772,077; Filed November 24, 2003

722

Attachments: Information Disclosure Statement Under 37 C.F.R. §§ 1.97 and
1.98 (2 pgs)
PTO Form SB/08 (4 pgs)

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Frank C. Eisenschenk
Frank C. Eisenschenk, Ph.D., Patent Attorney

INFORMATION DISCLOSURE STATEMENT
Examining Group 1645
Patent Application
Docket No. UF-167XC3D2
Serial No. 10/722,077

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Examiner : (Not yet assigned)
Art Unit : 1645
Applicants : Anthony F. Barbet, Michael V. Bowic, Roman Reddy Ganta, Michael John Burridge, Suman M. Mahan, Travis C. McGuire, Fred R. Rurangirwa, Annie L. Moreland, Bigboy H. Simbi, William M. Whitmire, Arthur Rick Alleman
Serial No. : 10/722,077
Filed : November 24, 2003
Conf. No. : 8724
For : NUCLEIC ACID VACCINES AGAINST RICKETTSIAL DISEASES AND METHODS OF USE

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT
UNDER 37 C.F.R. §§ 1.97 AND 1.98

Sir:

In accordance with 37 C.F.R. §§ 1.97 and 1.98, Applicants would like to bring to the attention of the Examiner, the references cited in the following patent applications:

U.S. Serial No. 10/062,994, filed January 31, 2002, now U.S. Patent No. 6,653,128;
U.S. Serial No. 09/553,662, filed April 21, 2000, now U.S. Patent No. 6,593,147;
U.S. Serial No. 09/337,827, filed June 22, 1999, abandoned;
U.S. Serial No. 08/953,326, filed October 17, 1997, now U.S. Patent No. 6,251,872;
U.S. Serial No. 08/733,230, filed October 17, 1996, now U.S. Patent No. 6,025,338.

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Docket No. UF-167XC3D2
Serial No. 10/722,077

37 C.F.R. § 1.98(d) states that a copy of any patent, publication, or other information listed in an information disclosure statement is not required to be provided if it was previously cited by or submitted to the Office in a prior application, provided that the prior application is properly identified in the statement and relied on for an earlier filing date under 35 U.S.C. § 120.

As copies of the references cited on the attached form PTO/SB/08, can be found in U.S. Serial No. 10/062,994, filed January 31, 2002, now U.S. Patent No. 6,653,128; U.S. Serial No. 09/553,662, filed April 21, 2000, now U.S. Patent No. 6,593,147; U.S. Serial No. 09/337,827, filed June 22, 1999; U.S. Serial No. 08/953,326, filed October 17, 1997, now U.S. Patent No. 6,251,872; and U.S. Serial No. 08/733,230, filed October 17, 1996, now U.S. Patent No. 6,025,338, copies of those references are not provided herewith. The subject application, Serial No. 10/722,077, claims the benefit under 35 U.S.C. § 120 of the filing dates of patent application Serial Nos. 10/062,994; 09/553,662; 09/337,827; 08/953,326; and 08/733,230. Accordingly, Applicants respectfully request that the copies of references supplied in the Information Disclosure Statements of the 10/062,994; 09/553,662; 09/337,827; 08/953,326; and 08/733,230 applications, as well as references cited during prosecution thereof, be made of record in this application.

Applicants respectfully assert that the substantive provisions of 37 C.F.R. §§ 1.56, 1.97, and 1.98 are met by the foregoing statements.

Respectfully submitted,



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FCE/mv

Attachment: Form PTO/SB/08 (4 pages)

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PTO/SB/08A (10-01)

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Substitute for form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>				Complete if Known	
Sheet	1	of	4	Application Number	10/722,077
				Filing Date	November 24, 2003
				First Named Inventor	Anthony F. Barbet
				Art Unit	1645
				Examiner Name	
				Attorney Docket Number	UF-167XC3D2

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cito No. ¹	Document Number Number - Kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
U1	US-4,879,213		11-07-1989	Fox et al.	All
U2	US-5,643,578		07-01-1997	Robinson et al.	All
U3	US-5,703,441		07-21-1998	Carl et al.	All
U4	US-6,025,338		02-15-2000	Barbet et al.	All
U5	US-6,251,072		06-26-2001	Barbet et al.	All
U6	US-				
U7	US-				
U8	US-				
U9	US-				
U10	US-				
U11	US-				
U12	US-				
U13	US-				
U14	US-				
U15	US-				
U16	US-				
U17	US-				
U18	US-				
U19	US-				
U20	US-				

FOREIGN PATENT DOCUMENTS					
Examiner Initials*	Cito No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Country Code ³ - Number ⁴ - Kind Code ⁵ (if known)			
F1	WO 00/12030		10-18-1990	Wash St U. Res Found Inc.	All
F2	WO 98/10554		04-23-1998	Univ. of Florida	All
F3	WO 98/13720		03-25-1998	The Ohio St Univ	All
F4					
F5					
F6					
F7					
F8					
F9					
F10					

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¹ Applicant's unique citation designation number (optional). ² See Kind Codes of USPTO Patent Documents at www.uspto.gov or MPEP 001.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

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**INFORMATION DISCLOSURE
 STATEMENT BY APPLICANT**
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Sheet 2 of 4

Complete if Known	
Application Number	10/722,077
Filing Date	November 24, 2003
First Named Inventor	Anthony F. Barbet
Group Art Unit	1645
Examiner Name	
Attorney Docket Number	UF-167XC3D2

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article, (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	R1	ROWIE, Michael V. et al., "Potential Value of Major Antigenic Protein 2 for Serological Diagnosis of Heartwater and Related Ehrlichial Infections," <i>Clinical and Diagnostic Laboratory Immunology</i> , 1999, 6(2):209-215, Pub: American Society for Microbiology	
	R2	BREITSCHWERDT, Edward B. et al., "Doxycycline Hydrate Treatment of Experimental Canine Ehrlichiosis Followed By Challenge Inoculation with Two <i>Ehrlichia canis</i> Strains," <i>Antimicrobial Agents and Chemotherapy</i> , 1998, 42(2):362-368, Pub: American Society for Microbiology	
	R3	BROQUI, P. et al., "Serologic Diagnosis of Human Monocytic Ehrlichiosis by Immunoblot Analysis," <i>Clinical & Diagnostic Laboratory Immunology</i> , 1994, 1(6):645-9, Pub: American Society for Microbiology	
	R4	BURGESS, Wilson H. et al., "Possible Dissociation of the Heparin-binding and Mitogenic Activities of Heparin-binding (Acidic Fibroblast) Growth Factor-1 from Its Receptor-binding Activities by Site-directed Mutagenesis of a Single Lysine Residue," <i>Journal of Cell Biology</i> , 1990, 111:2129-2138, Pub: The Rockefeller Univ. Press	
	R5	COX, Graham J.M., et al., "Bovine Herpesvirus 1: Immune Responses in Mice and Cattle Injected with Plasmid DNA," <i>Journal of Virology</i> , 1993, 67(9):5664-5667, Pub: American Society for Microbiology	
	R6	DANKO, I. and J.A. Wolff, "Direct Gene Transfer into Muscle," <i>Vaccine</i> , 1994, 12:1499-1563, Pub: Unknown	
	R7	Du PLESSIS, J.L., "Immunity in Heartwater: I. A Preliminary Note on the Role of Serum Antibodies," <i>Onderstepoort J. vet Res.</i> , 1970, 37(3):147-150, Pub: Heer Printing Company (Pty) Ltd. for the Gov't Printer, Pretoria, Republic Of South Africa	
	R8	DUTTA, Sukanta K. et al., "Association of Deficiency in Antibody Response to Vaccine and Heterogeneity of <i>Ehrlichia risticii</i> Strains with Potomac Horse Fever Vaccine Failure in Horses," <i>Journal of Clinical Microbiology</i> , 1998, 36(2):506-512, Pub: American Society for Microbiology	
	R9	GODING, J.W., "Production and Application of Monoclonal Antibodies in Cell Biology, Biochemistry & Immunology," <i>Monoclonal Antibodies: Principles & Practice</i> (2d ed.), 1986, Ch.3, 78-83, Pub: Academic Press, Harcourt Brace Jovanovich, Publishers, Australia	
	R10	KELLY, P.J. et al., "Serological Evidence for Antigenic Relationships Between <i>Ehrlichia canis</i> and <i>Cowdria ruminantium</i> ," <i>Rcs. Vet. Sci.</i> , 1994, 56:170-4, Pub: unknown	
	R11	LAZAR, Eliane et al., "Transforming Growth Factor α : Mutation of Aspartic Acid 47 and Leucine 48 Results in Different Biological Activities," <i>Molecular and Cellular Biology</i> , 1988, 8(3):1247-1252, Pub: American Society for Microbiology	
	R12	LEWIS, Jr., G.E., et al., "Experimentally induced infection of dogs, cats, and nonhuman primates with <i>Ehrlichia equi</i> , etiologic agent of equine ehrlichiosis," <i>Am. J. Vet. Res.</i> , 1975, 36(1):85-88. (abstract), Pub: Unknown	

Examiner Signature	Date Considered
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**INFORMATION DISCLOSURE
 STATEMENT BY APPLICANT**

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Sheet

3

of

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Complete if Known

Application Number	10/722,077
Filing Date	November 24, 2003
First Named Inventor	Anthony F. Barbet
Group Art Unit	1645
Examiner Name	
Attorney Docket Number	UF-167XC3D2

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article, (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	R13	MAHAN, S.M., et al., "Molecular cloning of a gene encoding the immunogenic 21 kDa protein of <i>Cowdria ruminantium</i> ," <i>Microbiology</i> , 1994, 140:2135-2142, Pub: Unknown	
	R14	McGUIRE, Travis C., et al., "Recombinant Vaccinia Virus Expression of <i>Anaplasma marginale</i> Surface Protein : MSP-1a: Effect of Promoters, Leader Sequences and GPI Anchor Sequence on Antibody Response," <i>Vaccine</i> , 1994, 12(5):465-471, Pub: Butterworth-Heinemann Ltd.	
	R15	NYIKA, A. et al., "A DNA Vaccine Protects Mice Against the Rickettsial Agent <i>Cowdria ruminantium</i> ," <i>Parasite Immunology</i> , 1993, 20:111-119, Pub: Blackwell Science Ltd.	
	R16	OBERLE, Suzan M. and Anthony F. Barbet, "Derivation of the Complete <i>msp4</i> Gene Sequence of <i>Anaplasma marginale</i> Without Cloning," <i>Gene</i> , 1993, 136:291-294, Pub: Elsevier Science Publishers B.V.	
	R17	REDDY, G. Roman, et al., "Sequence Heterogeneity of the Major Antigenic Protein 1 Genes from <i>Cowdria ruminantium</i> Isolates from Different Geographical Areas," <i>Clinical & Diagnostic Laboratory Immunology</i> , 1996, 3(4):417-422, Pub: American Society for Microbiology	
	R18	RIKIHISA, Y., et al., "Western Immunoblot Analysis of <i>Ehrlichia chaffeensis</i> , <i>E. canis</i> , or <i>E. ewingii</i> Infections In Dogs and Humans," <i>J. Clin. Microbiology</i> , 1994, 32(9):2107-12, Pub: American Society for Microbiology	
	R19	RURANGIRWA, Fred R., et al., "Restriction of Major Surface Protein 2 (MSP2) Variants During Tick Transmission of the Ehrlichia <i>Anaplasma marginale</i> ," <i>Proc. Natl. Acad. Sci. USA</i> , 1999, 96:3171-3176 (abstract), Pub: Unknown	
	R20	SCHÖDEL, M.-T. Aguado and P.-H. Lambert, "Introduction: Nucleic Acid Vaccines, WHO, Geneva, 17-18 May 1994," <i>Vaccine</i> , 1994, 12(16):1491-1492, Pub: Butterworth-Heinemann Ltd., Switzerland	
	R21	SEDEGAH, Martha, et al., "Protection Against Malaria by Immunization with Plasmid DNA Encoding Circumsporozoite Protein," <i>Proc. Natl. Acad. Sci. USA</i> , 1994, 91:9866-9870, Pub: Unknown	
	R22	SUMNER, John W., et al., "Protection of Guinea-Pigs from Experimental Rocky Mountain Spotted Fever by Immunization with Baculovirus-Expressed <i>Rickettsia rickettsii</i> rOmpA Protein," <i>Vaccine</i> , 1995, 13(1):29-35, Pub: Elsevier Science Ltd., Great Britain	
	R23	UILENBERG, Gerrit, "Heartwater (<i>Cowdria ruminantium</i> Infection): Current Status," <i>Advances In Veterinary Science and Comparative Medicine</i> , 1983, 27:427-480, Pub: Academic Press, Inc.	
	R24	ULMER, J.B. et al., "Heterologous Protection Against Influenza by Injection of DNA Encoding a Viral Protein," <i>Science</i> , 1993, 259:1745-1749, Pub: Unknown	

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**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

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Sheet

4

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Application Number	10/722,077
Filing Date	November 24, 2003
First Named Inventor	Anthony F. Barbet
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UF-167XC3D2

NON PATENT LITERATURE DOCUMENTS

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	R25	ULMER, Jeffrey B. et al., "DNA Vaccines Promising: A New Approach to Inducing Protective Immunity," <i>ASM News</i> , 1990, 62(9):476-479, Pub: American Society for Microbiology	
	R26	van VLIET, A.H.M. et al., "Molecular Cloning, Sequence Analysis, and Expression of the Gene Encoding the Immunodominant 32-Kilodalton Protein of <i>Cowdria ruminantium</i> ," <i>Infection & Immunity</i> , 1994, 62(4):1451-6, Pub: Unknown	
	R27	Van VLIET, A.H.M., et al., "Use of a Specific Immunogenic Region on the <i>Cowdria ruminantium</i> MAP1 Protein in a Serological Assay," <i>J. Clinical Microbiology</i> , 1995, 33(9):2405-10, Pub: American Society of Microbiology	
	R28	VEMULAPALLI, R. et al., "Pathogenic, Immunologic, and Molecular Differences Between Two <i>Ehrlichia risticii</i> Strains," <i>J. Clinical Microbiology</i> , 1995, 33(11):2987-2993, Pub: American Society for Microbiology	
	R29	VISHWANATH, Suryanarayanan, et al., "A Recombinant <i>Rickettsia conorii</i> Vaccine Protects Guinea Pigs from Experimental Boutonneuse Fever and Rocky Mountain Spotted Fever," <i>Infection and Immunity</i> , 1990, 58(3):646-653	
	R30		
	R31		
	R32		
	R33		
	R34		
	R35		
	R36		

Examiner Signature	Date Considered

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